

***Leucas beddomei* (Hook. f.) Sunojkumar &  
P. Mathew (Lamiaceae), a new status and name for  
*Leucas hirta* var. *beddomei* Hook. f.  
— a little known endemic from India**

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**Abstract**

*Leucas hirta* var. *beddomei* Hook. f., a variety described based on Beddome's collection from the peak of Chembra hills, Wayanad of Kerala has been rediscovered from its type locality after over 120 years. After critical analysis, it is ascribed a species status. Descriptions, illustration and relationships are provided.

**INTRODUCTION**

The genus *Leucas* R. Br. with about 96 species are distributed in the tropical Africa, Arabia and Asia (Mukerjee, 1940; Sebal, 1980). In India, the genus is represented by 40 species and 11 varieties (Singh, 2001), of which 31 are found in southern Peninsular India and 18 are South Indian endemics.

*Leucas hirta* (Roth) Spreng. (1825) is a South Indian endemic species, the combination of name of which was based on *Phlomis hirta*, a species established as early as in 1821 by Roth based on Heyne's collection. Hooker (1885) recognized a new variety of the species as *Leucas hirta* var. *beddomei*, based on Beddome's collection from the peak of Chembra hills, Wayanad district of Kerala state. After this, no report or record of the collection of this taxon was available for the past 120 years (Singh, 2001). Gamble (1924) pointed out that this taxon is available in Wayanad (Kerala state) and South Canara (Karnataka state), based only on the same collection made by Beddome. The same view was followed by Mukerjee (1940) and Singh (2001) without citing any additional specimens. Singh (2001), in his revision of *Leucas* R.Br. of India has pointed out that he could not collect or see any specimens of this taxon other than the type.

## P. Sunojkumar and Philip Mathew

While attempting to collect all the species of *Leucas* in South India for the present revisionary study, we came across a curious specimen from the Peak of Chembra hill of Wayanad, which did not match with any of the species known. On examination of all the type specimens (herbarium & cibachrome photos), we concluded that this is the taxon which had been identified as *L. hirta* var. *beddomei* by Hooker (1885) on the basis of superficial resemblances and later followed by Gamble (1924), Mukerjee (1940) and Singh (2001).

Critical study of the fresh specimens revealed striking differences between the typical *L. hirta* and the taxon named as *L. hirta* var. *beddomei*, especially on its floral, and nutlet characters. Apart from the superficial resemblances of leaves and calyx, this recently collected material shows more similarity with *Leucas eriostoma* Hook.f. However the unique character combination noticed in this taxon are substantiating enough to treat it as a distinct species rather than as a variety of *L. hirta*. Therefore, it is decided to elevate its rank to that of a species.

A detailed description and illustration based on recent collection are provided for easy identification of this little known taxon.

***Leucas beddomei* (Hook.f.) Sunojkumar & P. Mathew comb. et stat. nov.**

*Leucas hirta* (Roth) Spreng. var. *beddomei* Hook.f., Fl. Brit. India 4: 687. 1885; Gamble, Fl. Pres. Madras 1153. 1915; Mukerjee, Rec. Bot. Surv. India 14 (1): 176. 1940; Singh, Mon. Indian Leucas 93. 2001

*Type:* India, Kerala, Wayanad, Chembra peak, 5000 ft., *Beddome s.n.* - type of *Leucas hirta* var. *beddomei* Hook.f. (Holotype - K, Cibachrome photo !).

. Erect undershrubs, 0.45-1 m tall, basal part woody; stem obtusely quadrangular, grooved, softly villous with spreading 1-1.5 mm long golden brown hairs; tender stem densely ciliate; Leaves opposite decussate, elliptic, obtuse, base angustate, margin crenulate with 16-19 convex teeth; petiole 1-1.5 mm long; lamina 5-10 x 2-3 cm, upper surface ciliate with 4-5 impressed parallel veins, lower surface veins projecting, hispid with spreading hairs; Inflorescence in upper several axis, dense and many flowered, shortly pedicellate; Bracts 7-8 x 1 mm, as long as calyx, linear elliptic divergent, ciliate with 1-1.5 mm long hairs; Bud oblong with bulged center and narrowed ends, teeth inwardly directed; Flowering calyx  $\pm$  8 mm long, densely ciliate with 1-2 mm long hairs, inside glabrous, tube narrowed below, upper half prominently nerved, and ribbed; mouth straight, villous with a ring of very short hairs, smaller than teeth, not visible outside; teeth 10, recurved in bud, short, less than 1 mm long, ciliate; Corolla 10-10.5 cm long, lower lip 4 x 2.5 mm, upper lip erect, densely bearded with brownish yellow and yellowish white hairs, arranged in opposite direction; lower lip white, 3 lobed, middle lobe emarginated, margin regular tube fully included, annulate below the middle with linearly arranged thick fleshy hairs above the annulus, stamens didynamous, filaments with slender hairs, fleshy hairs at base, anther lobes 1.4 x 0.75 mm. Style slender, 10.5 mm

*Leucas beddomei* – a new status and name for *Leucas hirta* var. *beddomei*

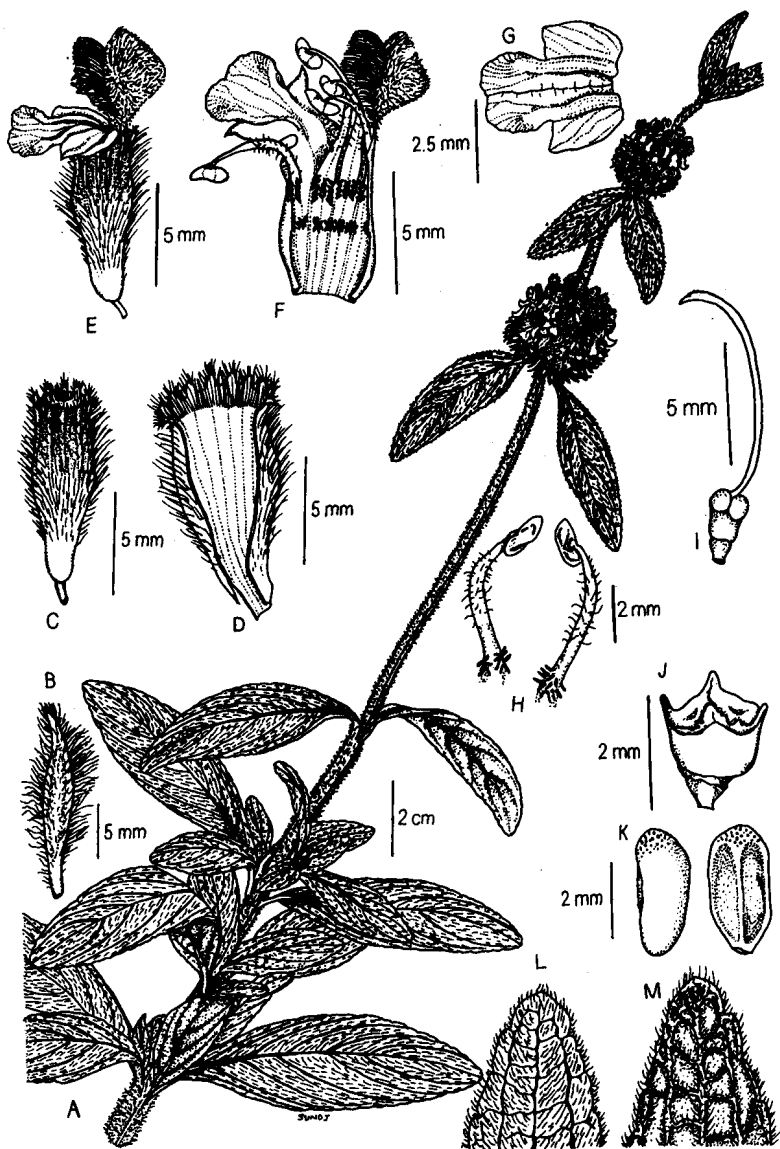


Fig. 1. *Leucas beddomei* (Hook. f.) Sunojkumar & P. Mathew: A. Habit – a flowering twig; B. Bract; C. Calyx; D. Calyx - split open; E. Flower; F. Corolla - split open; G. Lower lip of corolla; H. Stamens; I. Pistil; J. Basal disc; K. Nutlets; L. Apical portion of leaf – upper surface; M. Apical portion of leaf – lower surface (Drawings by Sunojkumar, P.).

### P. Sunojkumar and Philip Mathew

long, stigma lower lobe 0.26 mm long, subulate, upper lobe minute; Disc 4 lobed. Nutlets 3.3 x 1.4 mm, elliptic, triquetrous, top rounded and gland dotted, below smooth and shining, light brown.

*Flowering and fruiting*: September – March.

*Ecology and distribution*: Specimens of this taxon were collected from the peak of Chembra hills, alt.  $\pm 1770$  m in Wayanad district where a population is present. Gamble (1924) pointed that this is available in South Canara also but no specimen collected from this part is available.

*Specimen examined*: INDIA, **Kerala**, Wayanad: Chembra peak, Sunojkumar. P. CU 49631 (CALI).

A table showing the comparative and distinctive characters of *L. hirta*, *L. beddomei* and *L. eriostoma* are given below for an easy understanding of the taxa

| Character     | <i>L. hirta</i>   | <i>L. beddomei</i>  | <i>L. eriostoma</i>                                   |
|---------------|---|---|---|
| 1             | 2   | 3   | 4   |
| Habit         | Suffruticose<br>30–50 cm  | Erect branching under<br>shrub, $\pm 1$ m                           | Erect spreading herb with<br>woody base $> 1$ m       |
| Leaf          | 2.5–3.5 x 1–1.3 cm  | 5–10 x 2–3 cm   | 4–9.5 x 1–1.8 cm                                      |
| Margin        | 3–4 serrated  | 16–19 crenulated  | 8–9 long serrated                                     |
| Petiole       | 0–0.3 cm  | 1–1.5 cm  | 0–1 cm  |
| Inflorescence | Terminal  | In several axis   | In several axis                                       |
| Bract         | 10 x 1.5 mm   | 7–8 x 1 mm  | 5 x 0.3 mm  |
| Bud           | Campanulate, ciliate  | Elliptic, ciliate   | Tubular, glabrous                                     |
| Teeth         | 1.5 x 2 mm,<br>divergent  | $< 1$ mm, recurved  | 1 mm, spreading                                       |
| Calyx villai  | Long hairs, arranged<br>in a cone over the<br>mouth, closing it | Very small, not seen<br>outside                                     | Long dense silky,<br>forming a tuft over the<br>mouth |
| Calyx tube    | Fully ciliate   | Fully ciliate   | Glabrous  |
| Corolla       | 19–19.5 mm  | 10–10.5 mm  | 10–10.5 mm  |
| Upper lip     | White, dense hairs<br>spreading                                 | Brownish yellow and<br>yellowish white hairs<br>arranged oppositely | White, hairs spreading                                |

***Leucas beddomei* – a new status and name for *Leucas hirta* var. *beddomei***

| 1                                       | 2                            | 3                                  | 4                                  |
|---|------------------------------|------------------------------------|------------------------------------|
| Lower lip<br>(middle<br>portion)        | 10–11 x 8–8.5mm<br>not lobed | 4–4.5 x 2.5–2.8 mm,<br>emarginated | 4–4.5 x 2.5–2.8 mm,<br>emarginated |
| Nutlet size                             | 3 x 1.7 mm                   | 3.3 x 1.4 mm                       | 2.6 x 1.1 mm                       |
| Glands on top<br>of ovary and<br>nutlet | Absent                       | Present                            | Absent                             |

**Key to the related species of *Leucas***

- 1a. Calyx lower half leathery, glabrous, upper membranous ..... *L. eriostoma*
- 1b. Calyx fully ciliate, hairs up to 2 mm ..... 2
- 2a. Leaves up to 4 cm; upper lip of corolla white, lower middle lip not lobed, up to 8.5 mm, teeth 2mm, villi as long as teeth; nutlet smooth ..... *L. hirta*
- 2b. Leaves up to 10 cm; upper lip of corolla brownish yellow, lower middle lip emarginate, up to 4 mm, teeth below 1mm, villi very small; nutlet with glands at top ..... *L. beddomei*

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